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BEFORE THE  
**Federal Communications Commission**

WASHINGTON, D.C. 20554

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In The Matter of )  
 )  
Reorganization and Revision of ) WT Docket No. 94-148  
Parts 1, 2, 21, and 94 of the )  
Rules to Establish a New Part 101 )  
Governing Terrestrial Microwave )  
Fixed Radio Service ) DOCKET FILE COPY ORIGINAL

To: The Commission

COMMENTS  
OF THE  
AMERICAN PETROLEUM INSTITUTE

THE AMERICAN PETROLEUM INSTITUTE

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**SUMMARY**

The American Petroleum Institute ("API") supports the consolidation of Parts 21 and 94 into a new Part 101 in order to standardize and simplify microwave regulation. API is concerned that any consolidated rules continue to recognize the fundamental differences between the Private Operational-Fixed Microwave Service (POFS) and the Common Carrier Microwave Service (Common Carrier).

API believes that the Commission should permit both POFS and Common Carrier to operate stations at temporary locations. POFS users must be permitted to continue operating facilities in the band 2450-2500 MHz at temporary locations. API endorses the Commission's proposal to prohibit the repeated filing of applications for modification to extend construction periods, but believes a uniform 18-month construction period is also warranted.

In order to promote more efficient use of the spectrum, API urges the Commission to: (1) require applicants to submit detailed equipment and antenna information; (2) mandate frequency coordination prior to alteration of technical parameters; (3) permit assignment from a licensee to a new applicant of less than an entire station authorization; (4) adopt the proposal to require an

"in operation" signal to satisfy the construction requirement; and (5) eliminate fees for applications submitted solely to delete unused channel assignments.

API urges the Commission to set an effective date for the new rules at least six months after issuance of a Report and Order in this proceeding, and to permit all existing stations and those proposed in pending applications to be grandfathered indefinitely on a co-primary basis with systems proposed after the effective date.

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The American Petroleum Institute ("API"), by its attorneys, pursuant to the invitation extended by the Federal Communications Commission ("Commission") in its Notice of Proposed Rule Making ("Notice"),<sup>1/</sup> in the above-referenced proceeding, respectfully submits the following Comments for consideration by the Commission.

I. PRELIMINARY STATEMENT

1. API is a national trade association representing approximately 300 companies involved in all phases of the petroleum and natural gas industries, including exploration,

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<sup>1/</sup> 60 Fed. Reg. 2722, January 11, 1995. The time for filing these Comments was extended to February 17, 1995 by Order of the Chief, Wireless Telecommunications Bureau, adopted January 31, 1995 [DA 95-140].

production, refining, marketing, and transportation of petroleum, petroleum products and natural gas. Among its many activities, API acts on behalf of its members as spokesperson before federal and state regulatory agencies. The API Telecommunications Committee is one of the standing committees of the organization's Information Systems Committee. The Telecommunications Committee evaluates and develops responses to state and federal proposals affecting telecommunications facilities used in the oil and gas industries.

2. API's Telecommunications Committee is supported and sustained by licensees that are authorized by the Commission to operate, among other telecommunications facilities, point-to-point and point-to-multipoint systems in the Private Operational-Fixed Microwave Service ("POFS") that is governed by Part 94 of the Rules and Regulations. These telecommunications facilities are used to support the search for and production of oil and natural gas. Such systems are also utilized to ensure the safe pipeline transmission of natural gas, crude oil and refined petroleum products, and for the processing and refining of these energy sources, as well as for their ultimate delivery to industrial, commercial, and residential customers. The

facilities licensed to API's members are therefore essential to the provision of our nation's energy sources.

3. API's members utilize POFS systems to serve a variety of vital point-to-point and point-to-multipoint telecommunications requirements, including communications between oil and gas exploration and production sites, for supervisory control and data acquisition (SCADA) systems, to communicate with refineries, and to extend circuits to pipeline pump and compressor stations. The oil and gas industries were among the pioneers in the development of private microwave, utilizing their systems to remotely monitor and operate petroleum and natural gas pipelines. Accordingly, the API Telecommunications Committee participated in the Commission's earliest rule making proceeding that addressed private microwave use of the spectrum;<sup>2/</sup> and it has continued to be an active participant in every subsequent major proceeding affecting the POFS.

4. Consistent with its active involvement in telecommunications regulatory issues, the API Telecommunications Committee participated in nearly every

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<sup>2/</sup> In re Allocation of Frequencies in the Bands Above 890 Mc., Report and Order, Docket No. 11866, 27 F.C.C. 359 (1959).

phase of the Commission's Docket Nos. 90-314 and 92-9 that led to the reallocation of spectrum in the 2 GHz range for emerging technologies, including Personal Communication Services ("PCS"), and to the adoption of reaccommodation provisions for those 2 GHz POFS licensees required to vacate their assignments for those new spectrum uses. Those rule changes adopted in the reaccommodation proceeding introduced new spectrum sharing between POFS and common carrier services in the bands above 3 GHz, and addressed many of the issues resulting from that convergence of the two services. Inasmuch as some matters remained unaddressed, however, the Commission was motivated, in part, to initiate this proceeding. It also stated in the Notice its belief that "the Part 21 and Part 94 rules need to be consolidated, conformed and updated to allow the microwave industry to operate as efficiently as possible without being hampered by obsolete regulations."<sup>3/</sup> The Commission also noted that this proceeding provided it with an opportunity to "improve the organization of the microwave rules, to simplify them, to eliminate unnecessary language, and to make other substantive amendments."<sup>4/</sup> The API Telecommunications Committee applauds the task undertaken by the Commission to consolidate the rules and eliminate confusing provisions

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<sup>3/</sup> Note at ¶ 7.

<sup>4/</sup> Ibid.



that would become more magnified as spectrum sharing accelerates between the POFS and common carriers.

5. There are a few issues that have not been addressed in the Notice, and it is hoped that they can also be resolved in this proceeding. Additionally, in API's view, some elements of the proposed Part 101 require clarification. And, finally, API has two additional issues that it believes can also be addressed in this proceeding. Accordingly, API is pleased to have this opportunity to provide the following Comments.

## **II. COMMENTS**

### **A. Separate Private and Common Carrier Services Must Be Maintained**

6. While API supports consolidation of the common carrier and POFS microwave rules, it also wishes to underscore the absolute necessity of any ultimate Part 101 providing a clear distinction between the Private Operational-Fixed Microwave Service and the Point-to-Point (common carrier) Microwave Service. The Commission has included that delineation by proposing the inclusion of Subparts H and I in Part 101. However, as shall be discussed in these Comments, some of the provisions in each

of those subparts appear redundant and should be consolidated.

7. The distinction between the private and common carrier services must be maintained in light of the markedly different purposes for which they are used. While common carrier microwave facilities are used generally to provide for-hire services to many different types of subscribers, private systems are customized to meet the specific industrial, public safety, and commercial requirements of many companies and public agencies that constitute much of the infrastructure of this nation. These private systems are frequently the cornerstone of the automation systems that facilitate the safe and efficient delivery of essential products and services to the public. Accordingly, their design often incorporates greater reliability and flexibility than common carrier systems.<sup>5/</sup> API therefore urges the Commission to not lose sight of these essential distinctions as it evaluates the comments in this proceeding and works toward adoption of a final Part 101.

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<sup>5/</sup> Telecommunications reliability is often of paramount importance to infrastructure entities, such as pipelines, other public utilities, railroads, and public safety agencies. Use of private telecommunications systems permit such organizations to meet their own immediate restoration requirement, among other criteria; and, accordingly, the Commission must maintain the distinction between these two types of services.

**B. Application Contents and Frequency Coordination**

8. The Commission specifically asked whether it should continue to require the address and telephone number of a maintenance center or person responsible for technical operation of common carrier systems. API strongly endorses the Commission maintaining in its records, at a minimum, the name and telephone number of a person who may be contacted in each licensee's organization in the event of interference or for other official purposes. POFS applicants specify in Items 4 and 5 of the Form 402 the name and telephone number of a contact person regarding the application. API supports continued incorporation of that requirement in a future application revision. In cases of interference, the name and telephone number of such a person could facilitate early resolution of the interference situation that could otherwise lead to very hazardous situations.

9. Part 21 of the Rules and Regulations includes provision for the authorization of operational-fixed facilities at temporary locations. There are no similar provisions in Part 94 for POFS licensees; and, absent some compelling reason to exclude private users from availing themselves of this option, the Commission should use the

opportunity of this proceeding to extend that licensing flexibility to POFS users.

10. Many petroleum and natural gas companies do employ assignments from the band 2450-2500 MHz for operational-fixed stations at temporary locations. These facilities support short-term drilling operations both offshore and onshore. Additionally, these assignments are frequently used during the initial phase of a new activity until permanent facilities can be constructed. The proposed Part 101 does not contain a clear provision for continued use of the band for these important services. Accordingly, API recommends that the table in Section 101.101 contain a footnote that clearly provides for the use of assignments from this band for operational-fixed stations at temporary locations.

11. The Commission has proposed that the new Section 101.103 specify prior coordination notification ("PCN") as the coordination procedure for all applicants. API supports adoption of the PCN procedure in light of the belief that it should significantly reduce the number of mutually-exclusive filings that, in the case of numerous multiple address systems ("MAS") situations, resulted in the return of applications to applicants who were unaware of a

prior-filed application. In this same MAS context, however, transition to the PCN procedure may require a minor change in the manner in which the Commission makes available frequency assignments, particularly MAS channel pair, that have been "reclaimed" for non-construction or station closure. The Commission's Public Notice of such channel availability has heretofore generally specified a period of 30 days prior to the acceptance of applications for those channels. Inasmuch as the PCN process is ordinarily expected to require a period of 30 days, additional time should be permitted for the filing of applications for frequencies appearing on these Public Notices.

12. API also strongly urges the Commission to take this opportunity to require inclusion on applications of all equipment and antenna information necessary to effectuate the level of coordination required to permit efficient use of the spectrum. While such information previously was required of Part 94 applicants, items requesting that transmitter and antenna manufacturer and model have been deleted from the current Form 402. That change has led to the loss of data that could be helpful to frequency coordinators in facilitating greater use of the scarce microwave spectrum resource. In this same vein, it is respectfully submitted that all changes involving the

technical parameters of a station operation should be subject to frequency coordination.

13. In another application area, it is apparently contrary to Commission policy to permit the assignment from an existing licensee to a new applicant of less than an entire station authorization when, in fact, only one or a few of many transmitters are being sold. This process has necessitated POFS applicants who file as assignee for other facilities being acquired from the same licensee to either obtain new frequency coordination or provide a form of frequency coordination recertification. API urges the Commission to take the opportunity of this proceeding to eliminate this burden inasmuch as frequency coordinators obtaining copies of applications filed at the Commission will be on notice that only a portion of an authorization is being assigned in these circumstances. This process could be even further simplified by including a box on the application to be checked for partial assignment.

14. The Commission's process currently requires the payment of an application fee by those licensees who submit applications for the sole purpose of deleting channel assignments no longer being used. In the interests of encouraging the cancellation of authority no longer being

employed, thus freeing them up for others to use, it is recommended that the Commission exempt from the payment of fees all applications filed for the sole purpose of deleting unused channel assignments.

15. API representatives have worked diligently with the previous Private Radio Bureau to pave the way for the electronic filing of Private Land Mobile Radio applications. Substantial electronic commerce is conducted in the oil and gas industries through the use of Electronic Data Interchange ("EDI") data sets. API strongly supports the Commission's proposal to permit the electronic filing of microwave applications and encourages the Commission to implement that strategy at the earliest practical date.

#### **C. Construction and Operational Issues**

16. The Commission has proposed to codify in the new Part 101 the policy long enforced by the Private Radio Bureau that prohibits a licensee from extending its construction period indefinitely by continuing to obtain modification of its license(s). Codification of this policy should generally contribute to more efficient use of the microwave spectrum and, accordingly, API supports its inclusion in the new Part 101.

17. Consistent with adopting the foregoing policy, and in the interests of reducing the number of requests the Commission must respond to for extension of construction periods beyond the current 12-month period specified for most point-to-point stations, API urges that the new Part 101 provide for an 18-month construction for all stations. Construction can be delayed for myriad reasons, including inclement weather, local land use and other permit controversies, and revised budgets. API submits that the public interest will be served by providing an 18-month period for the construction of all point-to-point and point-to-multipoint facilities.

18. The Commission proposed in Section 101.67(d) to make it clear that only the transmission of "operational signals" will be sufficient to satisfy the "in operation" requirement of the rule. The simple transmission of test signals would not, the Commission proposed, satisfy the "in operation" requirement. API supports adoption of such a policy as being in the best interests of discouraging spectrum warehousing and permitting actual use of spectrum for those who have real operational requirements.

19. The Commission specifically requested comments on what requirements it should adopt regarding the retention



and posting of stations licenses. API recommends that the Commission adopt Part 101 provisions requiring the continued posting of station licenses so that there will be an on-site reference to the facilities for which authority has been granted should it become necessary to refer to the station license in the resolution of any interference. It is also believed that Part 101 must include provisions similar to those now found in Section 94.113 concerning records reflecting the licensee's compliance with tower lighting requirements of Part 17 of the Rules and Regulations.

20. The proposed Part 101 provides no transition mechanism from Parts 21 and 94 to the new Part 101 and, in that regard, includes no grandfather provisions for existing licensees or systems proposed in pending applications. API recommends that a transition date be set no sooner than six months following the adoption of a Report and Order in this proceeding. All systems authorized prior to that date and those proposed in pending applications should be grandfathered indefinitely and be afforded co-primary status with all subsequent systems authorized pursuant to the provisions of the new Part 101.

#### **D. Technical Standards**

21. API encourages the Commission to consolidate all of the common technical rules in Subpart C of the proposed Part 101. This should include a single frequency table instead of the two tables which have been proposed for Subparts H and I.

22. Licensee representatives have worked with the Telecommunications Industry Association ("TIA") in the development of the new TIA Bulletin 10-F that sets forth revised interference protection standards. API supports inclusion of that standard in Part 101 or, in lieu thereof, similar engineering standards.

23. Turning to the channel loading standards proposed in Section 101.141(a)(3), API submits that the proposed 50% payload capacity within 30 months of licensing for one DS-3 and above for bandwidths greater than 10 MHz is excessive. API urges the Commission to make these standards as flexible and unrestricted as possible. The Commission is asked to bear in mind that, in a typical POFS system, loading will vary from hop to hop, and over time. While it would be nice to custom fit each hop to actual traffic requirements,

practical realities dictate that flexibility is in the public interest.

24. Flexible loading standards are driven, in part, by the need to maintain as much consistency of equipment as possible within a system. Equipment consistency improves reliability and lowers costs through (a) simplified training and testing, and (b) a simplified spare parts inventory.

25. Moreover, the loading percentage needs to be low enough that licensees do not get caught in a "catch 22" between standard sizes. For example, if an initial requirement is for 3 DS1's, and one expects to subsequently expand to 5 DS1's, and radios only come in 4 DS1's and 8 DS1's, a licensee would want the flexibility to purchase an 8 DS1 radio. If the Commission sets the minimum channel loading at 50%, it is obvious that a licensee in this example would be caught in a "catch 22" situation. In this example, an initial loading of 37.5% would be highest workable minimum.

26. A different situation prevails when a licensee has a traffic requirement smaller than a reasonable fraction of the smallest standard size radio. For example, 2 DSO's on a DS1 radio. For this reason, it is necessary that licensees

using the smallest capacity standard equipment (or channel) always be exempt from any loading requirement.

27. Licensees also have a need to utilize standard interfaces. For example, in a three-hop system, hop "A" may carry 18 DS1's while hop "B" transports 13 DS1's and hop "C" carries 20 DS1's. While one could get the job done with two standard types of radios (16 DS1 and 1 DS3), it may be desirable to use a DS3 radio on all three hops because the overhead bites that carry diagnostic and alarm information is often not compatible between the two types of radios listed above.

28. Finally, licensees' needs change. Systems grow and contract over time in way not envisioned at the system's inception. Accordingly, it is extremely important that loading standards for POFS include maximum flexibility.

29. Automatic Transmitter Power Control ("ATPC"), a feature of digital microwave equipment that permits a transmitter to operate at less than maximum power, is currently permitted with common carrier systems. Guidelines for use of ATPC are set forth in TIA Bulletin 10-F; and, in light of its ability to enhance frequency reuse, API urges

the Commission to permit its use in the Private Operational-Fixed Microwave Services.

### **III. CONCLUSION**

30. API supports consolidation of Parts 21 and 94 into a new Part 101. Nevertheless, the new Part 101 must include the necessary distinctions between the Private Operational-Fixed Microwave Service and the Point-to-Point (common carrier) Microwave Service. The Commission is urged to further eliminate the remaining redundancies in Subparts H and I and incorporate in the final Part 101 those further provisions discussed herein.

**WHEREFORE, THE PREMISES CONSIDERED,** the American Petroleum Institute Telecommunications Committee

respectfully submits the foregoing Comments and urges the Federal Communications Commission to act in a manner consistent with the views expressed herein.

Respectfully submitted,

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